Received: 27 February 2020 | Revised: 30 March 2020 | Accepted: 6 April 2020

DOI: 10.1111/sms.13681

EDITORIAL

WILEY

Elite football of 2030 will not be the same as that of 2020: Preparing players, coaches, and support staff for the evolution

Modern elite football is getting more and more demanding in terms of the numbers of matches played during the season that may add extra physical and mental load to the players. A top level European team used to play around 50 matches in the 2008/2009 season, and this number has increased to around 60 in the 2018/2019 season. In addition, for the most outstanding players, we also have to add the friendly matches as well as the international fixtures to the total. This may result in more than 70 matches played per season.[1] The UEFA Elite Club injury study with 36 top European clubs reported a 2.5-fold increase in training and match time between the 2001/2002 and 2013/2014 season,[2] and this constitutes an elevated workload for the players.

Tactical changes in match play and the new organizational initiatives launched by FIFA are expected to have a massive impact on players' physiological and psychological demands. The number of matches played will probably rise substantially in the near future as a consequence of the following: (a) From 2021 or later, as the final decision of FIFA on fixtures reshuffling due to COVID-19 pandemic is pending, the expanded edition of the FIFA Club World Cup will be launched with 24 teams participating; (b) the FIFA World Cup Qatar 2022 will be held in November and December, right in the middle of most European league competitions; and (c) from 2026, the FIFA World Cup will be played with 48 teams instead of 32 that participate now. These changes collectively with the increasing number of knockout matches in the FIFA tournaments will increase the occurrence of extra-time imposing additional challenge to players and to team preparation.[3] The aim of this editorial was to explore the evolution of the game and speculate on the potential impact the organizational and tactical changes may have on players' performance, mental, and physical health. The ultimate aim was to prepare the medical, sports science, and coaching staff on better handling the challenges ahead.

1 | TACTICAL CHANGES: DO THEY MATTER TO PLAYERS' PERFORMANCE AND HEALTH?

Football is likely to be played at higher speeds in the future with more dense periods of high-intensity efforts. An analysis of the FIFA World Cup finals between 1966 and 2010[4] reported an increase in the number of passes per minute by around 35% (from 11 to 15 passes/min) and an increase in the game speed, using ball tracking, by 15% (from an average of 8.0 m/s to 9.2 m/s). Assuming a similar trend in the future, the game speed will be increased by ~5% between 2010 and 2025 and by ~7% in 2030, reaching a value of around 9.8 m/s.[5] The number of passes per minute may increase to above 16 by 2030 from 10.7 in 1966 and 14.7 passes/min in 2010.[4] With regard to the match running distance, data from the English Premier League between 2006/2007 and 2012/2013 showed a ~20% elevation (~3% increase per year) in the distance covered at high-intensity and a ~50% increase in the number of high-intensity actions.[5] The total sprint distance increased by 8% in the same period. Assuming a comparable trend for the season 2013/2014 and beyond, one would expect an additional increase of >40% in the distance covered at high-intensity running in 2030 compared with that covered during the 2012/2013 season. We assume that this trend observed in the English Premier League will be presented in other national football leagues too.

To win the game, teams will apply more pressure, with pressing high in the field more frequently and repressing at a faster tempo, and make even more counterattacks with coordinated multiplayer sprinting. The playing positions with least physical strain in elite football of 2020, the central defenders and the goalkeepers, are expected to contribute more, with central defenders taking a more active role in attacking, and with goalkeepers more active in the building up of attacks. Together, we expect players to cover more distance at high speeds and execute a higher number of passes and kicks.

Both components might raise the risk of muscle injuries.[6] Assuming more training commitments, higher task repetitions, and media engagement of elite players, this may lead to mental fatigue development as recent evidence suggests.[7]

2 | HOW WILL THE EXPECTED EVOLUTION AFFECT PRACTITIONERS? WHAT CAN WE DO?

Football players will have limited time for recovery in the near future due to the congested schedules, which may add to the risk of injury.[8] To protect the players, we may consider the following:

1. Player recruitment. Using analytics, emphasis should be to recruit the best and most robust players for position-specific team needs. To overcome the growing demands, players with mental resilience will have an advantage.[9]
2. Prepare the players for the future game. Players should perform sufficient high-intensity bouts in training with emphasis not only on the number of bouts but also on the density too (ie, number of high-intensity efforts within 1-2 minutes).[4] Multicomponent training programs that include computational algorithms to individualize the risk of injury might be useful in protecting players from injuries especially of the hamstrings and groin region.[10]
3. Monitor and assess injury risk in real time. This may assist in decision-making with regard to playing formation and the usage of substitutes during match play. The integration of data collected with tracking systems with microsensor inputs in real time using artificial intelligence algorithms is likely to be essential.[11]
4. Focus on the most effective recovery methods. Positional and individual variability in fatigue and recovery patterns should be established. Maintenance of mental health will become a concern, and evidence-based strategies should be implemented to protect the player's health.

3 | FOOTBALL IN A NEAR FUTURE WILL NOT BE ENTIRELY THE SAME AS THAT OF 2020

Footballers will play more matches per season, at higher intensities with more frequent and dense periods of high-intensity efforts in the near future. The changes in playing formation will impose additional physiological and psycological stress, and are expected to raise the risk of injuries. Support staff may consider adjusting their strategies. Football governing bodies and clubs can contribute by implementing appropriate coaching education.

CONFLICT OF INTEREST

None to declare.

AUTHORS' CONTRIBUTIONS

GPN drafted the original paper. AM, PJ, JB, MBR, CC, MM, and PK have been involved in drafting the manuscript and revising it critically. All authors have given final approval of the version to be published.

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